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Paper for DD/S&T: for DCI

Subject: The tone of things to come in the photographuc etc,

reconnaissance field in th4 next 15 years;

General Outline and subjects to be covered:

OXCART, TAGBOARD, SUBSONIC DRONES, TACTICAL SYSTEMS;
ISINGLASS, BALLOONS, MISCELLANCEOUS; TV, NEW 25X1
FILMS, DATA HANDLING, COMMO SATELLITE USAGE,

Sequence of events, what is needed, dollars vs time for various items; levels of effort, intermediate development spots, logical progression oof ideas and developments, etc.

NRO review(s) completed.

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24 May 1965

DRAFT

Development Goals for the 1970 - 1980 Era

- 1. The general goal for the 1970 1980 era is to shorten significantly the time of between request for information and receipt of the required intelligence. This goal has, in fact, both aspects requiring development:
  - a) Shortening of the time from request to acquisition of raw data
  - b) Shortening of time from acquisition of raw data to analysis
  - c) Ensuring that adequate presentation of analysis can be made
  - d) Ensuring reasonable reliability of abtaining the desired intelligence.
    - 1) System reliability
    - 2) System invulnerability politically

militarily

These developments can be reflected in hardware developments in several areas:

a) Photog4aphic platforms

Aircraft

Satellites

Balloons

b) Photographic sensors

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spectral resolution angular resolution area covered

- c) Data recording and transmitting
  improved photographic films
  non-silver halide films
  digital recording
  analog and digital data transmission (electrical/radio)
- d) Data Analysis

Image integration

File retrieval, for comparison purposes

Search and acquisition of particular detail

Imag analysis by automatic means

change detection

Explicate spectral (spacial) analysis

Economic, etc., analysis to determine economic capagility

for warfare, etc.

SEGRET

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### **Quick Reaction Over-flight Vehicles:**

1. <u>Current Inventory</u>: The current inventroy of over-flight vehicles available for "quick reaction" coverage of various areas include the IDEALSST, OXCART, and various USAF drowne systems

and may well be considered <u>obsolete</u>. It is vulnerable to existing Soviet defenses, including the SA-2 and possibly also the M-IG-21. In addition to the Soviet Union, these weapons are coming in to the inventory of various other countries, both within the normal Soviet bloc as well as in various other Soviet supported military establishments.

OXCART: The A-12 has not been operationally deployed at this time. It is known, however, that some of the developing Soviet defences have capability against this vehicles. On this basis, one may well consider that the OXCART system is already close to an obsolesence condition. Its usefulness for Soviet overflight will be very limited; the developement of suitable defences in China may not be too far behind.

<u>Drones:</u> The current experience with drones in the China and Viet-Nam exercises is such that we cannot consider them very satisfactory, nor sufficiently invulnerable for normal overflight missions.

TAGBOARD: The TAGBOARD development is proceeding. It is expected that this vehicle will have

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- i) Supersonic (OXCALT)
- ii) Hypersonic, gliders (15/NGLASS)
- iii) Hypersonic powered flight ( 15106 LASS II)
- iv) Multipass and continuous satellites ( TET ELO

25X1

- v) Single pass satellites (incl sub-orbital) 25X1
- vi) Subsonic (including balloons, etc)
- n) Modes of operations
  - i) "normal" surveillance
  - ii) crisis conditions, strategic
  - iii) crisis conditions, tactical
  - iv) war-time operations, limited war
  - v) war-time operations, total war.

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laser, etc.

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#### **PLATFORMS**

Now:

(available or in late development stages)

U-2: subsonic, high altitude airdraft, 1 foot photo platform
OXCART: Mach 3, high altitude aircraft, 1 foot phot platform
SR-71: Incrased payload, extended performance advanced
version of OXCART; both O&71 require adv. elec. co. m.
TAGBOARD: Mach 4 drome, under development

CORONA: Low resolution satellite system, about 14 day reation

Drones: Subsonic, high altitude drones in AF inventory, fairly high vulnerability

RB 57F: High altitude, subsonic large payload, periferal flight

-RB 47- (generally elint)

Miscellanceous USAF reconnaissance aircraft, subsonic and limited supersonic

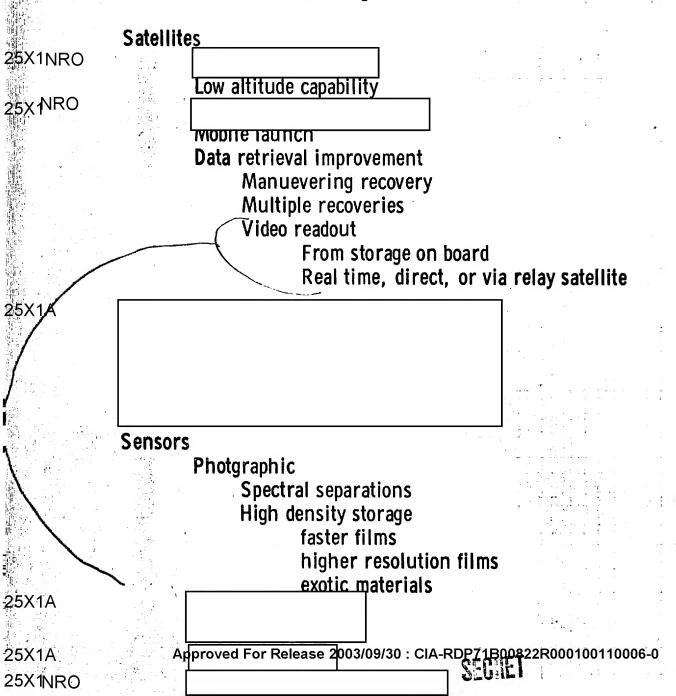
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#### **Development areas**

#### Propulsion:

High specific reckets
high pressure
exotic fuels
Air breathing engines
supersonic combustion ramjet
air collection schemes
Nuclear aircraft engines



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<b>25</b> X1A	6) Hyperronic aircraft.		<b>-</b> -
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Miscellaneous notes used in preparation of long range forecasting 4 copies